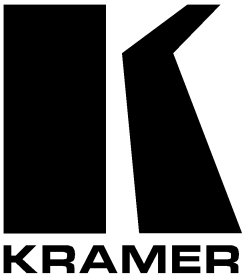
Kramer Electronics, Ltd.



USER MANUAL

Model:

VP-419

Video To SXGA/HD Scaler

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 350-plus different models now appear in 8 Groups[1], which are clearly defined by function.

Congratulations on purchasing your Kramer **VP-419** *Video To SXGA/HD Scaler*. This product is ideal for:

- Projection systems in conference rooms, boardrooms, hotels and churches
- Home theater up-scaling

The package includes the following items:

- **VP-419** *Video To SXGA/HD Scaler*
- Power adapter (5V DC input)
- Infra red remote control transmitter
- This user manual[2]

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables[3]

3 Overview

The high performance **VP-419** *Video To SXGA/HD Scaler* is designed to convert composite video, s-Video or component video signals to a variety of computer and HDTV resolutions for viewing on most LCD, plasma and HDTV displays.

1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from the Internet at this URL: http://www.kramerelectronics.com

3 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com

Video inputs are de-interlaced and scaled to the selected PC or HDTV resolutions, as follows:

- VGA (640x480)
- SVGA (800x600)
- XGA (1024x768)
- SXGA (1280x1024)
- 480p
- 576p
- 720p
- 1080i

The **VP-419** *Video To SXGA/HD Scaler* also features:

- Automatic detection of NTSC, PAL-B, PAL-G, PAL-I, and PAL-D video standards
- On-Screen Display (OSD) for easy setup and adjustment
- A high-performance adaptive 3D comb filter (for precise color management)
- Per-pixel motion compensated de-interlacing for artifact-free video images
- Automatic detection for 3:2 pulldown for 24fps film source material
- Frame rate conversion of 50Hz to 60Hz for PAL input signals
- A Vertical Temporal (VT) Filter for removing jagged artifacts
- A built-in DCTI/DLTI circuit for color/luminance transient improvement
- A PC Input connector for easy integration into an existing system
- A non-volatile memory that retains the last settings used

Control your **VP-419**:

- Directly, via the front panel push buttons
- Remotely, from the infra-red remote control transmitter

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise-levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances and position your Kramer **VP-419** away from moisture, excessive sunlight and dust

4 Your VP-419 Video to SXGA/HD Scaler

Figure 1, Table 1 and Table 2 define the **VP-419** *Video To SXGA/HD Scaler*:

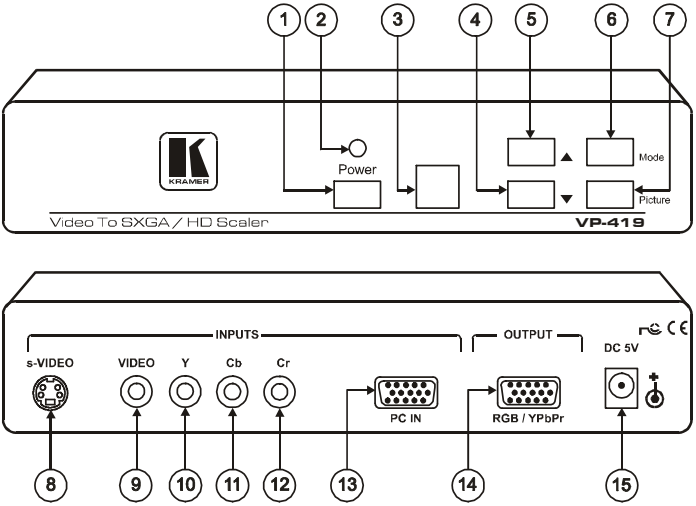

Figure 1: VP-419 Video To SXGA/HD Scaler – Front and Rear View

Table 1: Front Panel Features and Functions of the VP-419 Video To SXGA/HD Scaler

#	Feature	Function
1	*Power* Switch	Switch for turning the unit ON or OFF
2	Power LED	Lights when receiving power
3	IR Sensor Window	Receives IR commands
4	▼ Button	Press to control or adjust the MODE and the PICTURE values[1]
5	▲ Button	Press to control or adjust the MODE and the PICTURE values[1]
6	*Mode* Button	Displays the OSD screen and toggles through the Source, Resolution, Output, Aspect, 3D Enhance, and Digital NR modes (see section 6.1.1)
7	*Picture* Button	Press to toggle through the following picture adjustment parameters: Contrast, Brightness, Color, Tint and Sharpness (see section 6.1.2)

Table 2: Rear Panel Features and Functions of the VP-419 Video To SXGA/HD Scaler

#	Feature		Function
8	*INPUTS*	*s-VIDEO* 4p Connector	Connects to the s-Video source
9		*VIDEO* RCA Connector	Connects to the composite video source
10		*Y* RCA Connector	Connects to the interlaced[2] component video source[3]
11		*Cb* RCA Connector	
12		*Cr* RCA Connector	
13		*PC IN* HD15 Connector	Connects to the VGA/Y, Pb, Pr source[4]
14	*OUTPUT RGB / YPbPr* HD15 Connector		Connects to the RGB or HDTV (component video) acceptor
15	DC 5V		5V DC connector for powering the unit

1 Press the ▼ and the ▲ arrows simultaneously to reset the unit to its factory default settings

2 Not compatible with progressive scan Y, Pb, Pr or HDTV

3 For component video, connect all 3 connectors: Y, Cb, Cr (also known as YUV)

4 This PC input signal is not scaled, but is available for pass-through when the PC source is selected

5 Connecting the VP-419 Video To SXGA/HD Scaler

Connect your **VP-419**, as the example in Figure 2 illustrates[1]:

1. Connect an s-Video source (for example, an s-Video camcorder) to the s-VIDEO INPUT 4p connector.
2. Connect a composite video source (for example, a composite video player) to the VIDEO INPUT RCA connector.
3. Connect a component video source (for example, a DVD player) to the Y, Cb and Cr INPUT RCA connectors.
4. Connect a VGA graphics source to the PC IN INPUT HD15 connector[2].
5. Connect the RGB / YPbPr OUTPUT HD15 connector to a video acceptor (for example, a plasma display)
6. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in this illustration).

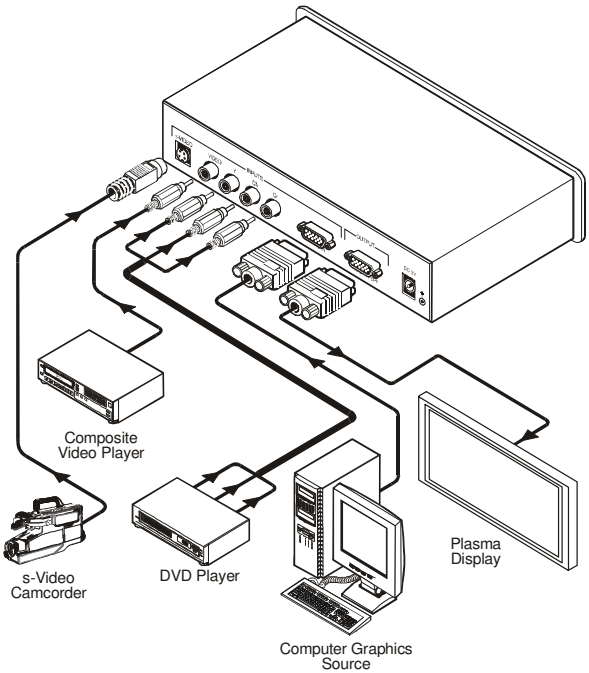

Figure 2: Connecting the VP-419 Video To SXGA/HD Scaler

1 You do not have to connect all the inputs, connect only those that are required

2 This PC input signal is not scaled, but is available for pass-through when the PC Source is selected

6 Controlling the VP-419

The **VP-419** can be controlled directly via the front panel buttons (see section 6.1) and/or remotely from the infra-red remote control transmitter (see section 6.2)

6.1 Controlling via the Front Panel Buttons

The **VP-419** includes the following control front panel buttons:

- A Mode button (see section 6.1.1) and a Picture button (see section 6.1.2)
- Arrow up (▲) and arrow down (▼) selector buttons

6.1.1 Using the Mode Button

- Press the Mode button to enter and toggle through the OSD menu, which is displayed on the video output, using the ▲ or ▼ buttons.

Table 3 defines the Mode button features and functions.

Table 3: The Mode Button Features and Functions

Mode	Function
Source	Select the desired input source: video, s-Video or component video
Resolution	After selecting the output type, select between the RGB output resolutions (VGA, SVGA, XGA or SXGA) or the YPbPr output resolutions (480p, 576p, 720p or 1080i)
Output	Select a PC (RGB) output or an HDTV (YPbPr) output
Aspect	Select between the standard aspect ratio (4:3) and the wide aspect ratio (16:9)
3D Enhance	Turn the 3D comb filter function ON or OFF[1]
Digital NR	Turn the digital noise reduction function ON or OFF

6.1.2 Using the Picture Button

Use the Picture button to toggle through the picture adjustment parameters and then use the ▲ or ▼ buttons to adjust the level. Table 4 defines the Picture button functions.

Table 4: The Picture Button Functions

Parameter	Function	Range	Default
Contrast	Adjust the contrast	From 0 to 48	40
Bright	Adjust the brightness	From 0 to 48	24
Color	Adjust the color	From 0 to 48	24
Tint (NTSC only)	Adjust the tint	From 0 to 48	24
Sharpness	Adjust the sharpness	From 0 to 48	10

1 When a video player or a non-standard video source is connected to the output, the output picture may jitter. If this occurs, turn the 3D Comb Filter to OFF

6.2 Controlling via the Infra-Red Remote Control Transmitter

You can control the **VP-419** from the infra-red remote control transmitter, as Figure 3 and Table 5 define:

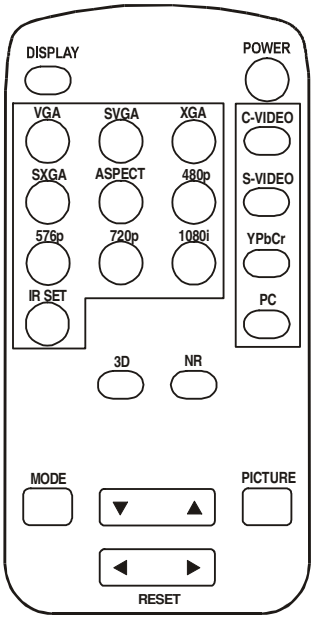

Figure 3: Infra-Red Remote Control Transmitter

Table 5: Infra-Red Remote Control Transmitter Functions

Keys	Function
POWER	Turn power ON or OFF
DISPLAY	Turn resolution information OSD ON or OFF
C-VIDEO	Select the composite video input
S-VIDEO	Select the s-Video input
YCbCr	Select the component video input
PC	Select the input PC to loop-through
VGA	Set the output resolution to 640x480
SVGA	Set the output resolution to 800x600
XGA	Set the output resolution to 1024x768
SXGA	Set the output resolution to 1280x1024
480p	Set the output resolution to 852x480p
576p	Set the output resolution to 852x576p
720p	Set the output resolution to 1280x720p
1080i	Set the output resolution to 1920x1080i
ASPECT	Select the normal (4:3) or the wide (16:9) aspect ratio
IR SET	Not used
3D	Turn the 3D enhance feature ON or OFF
NR	Turn the digital noise reduction feature ON or OFF
MODE	Toggles between each of the following modes: source, resolution, output, aspect, 3D enhance, and Digital NR
PICTURE	Toggle through the following picture adjustment parameters: contrast, brightness, color, tint and sharpness
▼ ▲	Press to control or set picture parameters
RESET	Not used

7 Technical Specifications

Table 6: Technical Specifications[1] of the VP-419 Video To SXGA/HD Scaler

INPUTS:	1 VGA/SVGA/XGA/SXGA on an HD15F connector 1 composite video on an RCA connector 1 component video (Y, Cb, Cr) on RCA connectors 1 s-Video on a 4p connector
OUTPUT:	1 RGB/YPbPr on an HD15F connector
OUTPUT RESOLUTIONS:	VGA (640x480), SVGA (800x600), XGA (1024x768), SXGA (1280x1024), HDTV: 480p, 576p, 720p, 1080i
CONTROLS:	Front panel buttons and infra red remote for menu driven OSD control
ADDITIONAL CONTROLS:	Contrast, brightness, color, tint and sharpness; Resolution, output image scaling, output mode, 3D comb filter function and aspect ratio
POWER SOURCE:	5VDC, 2A
DIMENSIONS:	19.2cm x 13cm x 4cm (7.6" x 5.1" x 1.6") W, D, H
WEIGHT:	1.1kg (2.4lb.) approx.
ACCESSORIES:	Power supply, remote control transmitter

1 Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   - ii) Product modification, or failure to follow instructions supplied with the product
   - iii) Repair or attempted repair by anyone not authorized by Kramer
   - iv) Any shipment of the product (claims must be presented to the carrier)
   - v) Removal or installation of the product
   - vi) Any other cause, which does not relate to a product defect
   - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.
NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.
This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC Rules and Regulations: Part 15: "Radio frequency devices Subpart B – Unintentional radiators"

CAUTION!

- ⌦ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ⌦ Use the supplied DC power supply to feed power to the machine.
- ⌦ Please use recommended interconnection cables to connect the machine to other components.

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found.
We welcome your questions, comments and feedback.

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

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P/N: 2900-000059 REV 1